Tamgas, a Code of the Steppes. Identity Marks and Writing among the Ancient Iranians

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My subject is a topic that has seldom been discussed outside the specialized scholarly literature, although it has an important bearing on the overall knowledge of the ancient history of Eurasia (Jänichen 1956; Ol'khovskii 2001; Yatsenko 2001). The focus of the paper is a peculiar class of marks — identity marks — that have been used for centuries (and are still in use) by various populations in every period and area of the world: Iranians and Turks, Celts (Gambacurta 2013, p. 33, Fig. 1) and Vikings — just to limit ourselves to the Eurasian continent — through the ages had wide inventories of identity marks of their own. Heraldic insignia as the coats of arms of the European aristocracy are still in use today (van Gennep 1905).

In this paper I will deal specifically with the identity marks used by the ancient Iranians, living in an area extending from Eastern Europe to inner Mongolia, from the Late Iron Age to pre-Islamic times (Fig. 1). However, the paper, is not meant to track a history of such marks through the major periods involved (mainly the Achaemenid, the Parthian and the Sasanian empires). Rather, it will discuss their functions and social implications, especially their relationship to writing (methodological matters that are more commonly investigated by anthropologists and semiologists), and it will explore a few topics that deserve further research in the future.

The peculiar identity marks of the ancient Iranians, that are composed by lines, circles, and geometrical shapes arranged in various ways, are usually called "tamgas," using a Turkic word, inasmuch they were later widespread among the Turks, Mongols, Kazakhs and even Slavs.[1] Mongolia and Kazakhstan are in fact the two countries where tamgas (there called "tamagas") are most often used today, where researchers can still observe their transmission and changes through the generations and study the social premises and implications of their use (Waddington 1974). The Turkish term "tamga," strictly speaking, would not be appropriate to describe the pre-Turkic marks of the ancient Iranian peoples, namely those which I will discuss here: the Iranian term "nishan" would better match them. However, "tamga" has generally met the favor of scholarship dealing with the ancient Iranians, therefore it will be used in this paper too. The origin of the word "tamga" lies possibly in the Alanic language that is directly descended from the earlier Scytho-Sarmatian language and therefore belongs to the family of the Eastern Iranian languages. According to Vernadsky (1956, p. 189), "tamga" would descend from the Alanic term "damyghœ," meaning "clan emblem," in its turn related to the word "dœ myg," meaning "your sperm." This word clearly relates to family and blood relations, i.e., the conceptual

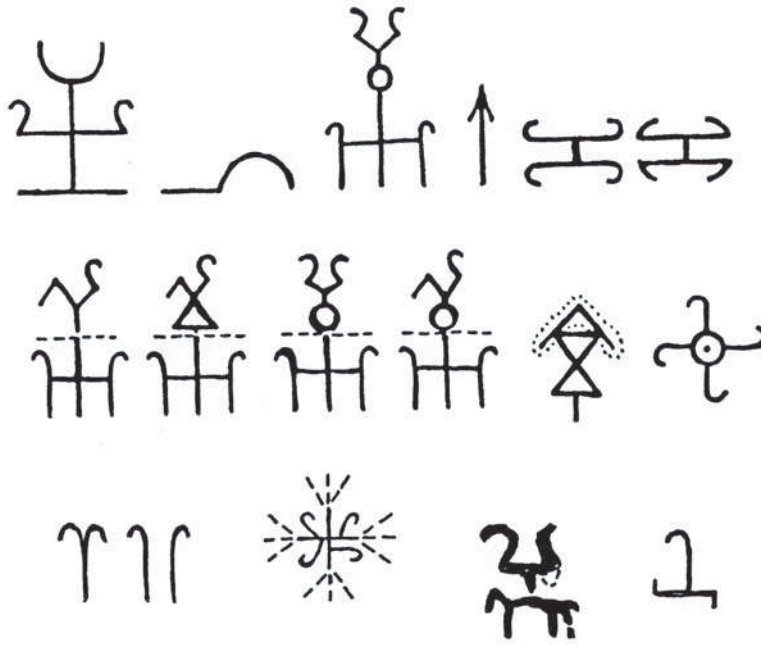

Fig. 1. Examples of Sarmatian tamgas.
After: *Yatsenko 2001, p. 164, Fig. 14.*

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sphere where tamgas do belong. Moreover, an earlier root for the word "tamga" has been recently proposed (Perrin 2010, p. 24, n. 1): a borrowing from the Greek word "tagma," involving metathesis, would bear on the relevant fields of taxation and tagging. Whatever the real origin of the word, the relevance of tamgas within the fields of identity and blood relations, ownership and administration, can be established for every society within they were (and are still) used.[2]

Since time immemorial, man marks his own properties — lands, animals, stuff — in order to claim rights to them and preserve them from theft or assault. Rooted in man's biological legacy, such use descends from the animal instinct to mark the environment by means of tracks, scratches and smells (Perrin 2010). As every animal does it in order to inform about its presence, to establish hierarchies, to claim rights to an area and to prevent struggles for it, so also do humans need to signal their presence, to mark the areas where they live basically for the same purposes. The animal instinct is developed into well codified customs within human society: it has evolved and adapted to complex social conditions that require elaborated codes and rules, that may lean on various kinds of distinguishing marks, and may be supported by language, a very important feature that is exclusive to the human species. Since olfactory means are losing importance (being however not completely neglected), in human societies the reminders about identity and ownership may be expressed mainly by physical or visual means and by linguistic means, namely by marks and words.

Marks are a primitive, though very efficient way to convey information on identity. These mnemonic devices that may be depicted on several kinds of objects (seals, pottery, bricks and stones, head-gear, carpets, dress and even skin[3]) are immediately understandable by people living within the same areas, even if they cannot read. Marks must not be read, but have to be recognized. As we live in a world dominated by communication and advertising, we well know the value of clear and distinguishable brands as a key to profit (Mollerup 1997). Just like advertising marks (Fig. 2), identity marks always had to be clearly identifiable. A lot of delicate matters might depend on prompt recognition in the past too, such as social stability, peaceful relations with neighboring populations, ensuring fairness in trade, and so on.

Fig. 2. Modern brands as tamgas.
After: *Perrin 2010, p. 56, Fig. 18.*

However, the appearance of the Iranian tamgas is seldom plain and geometrical as is that of the advertising brands: rather, tamgas are often complicated, asymmetrical and unclear, thus giving rise to many different hypotheses about their meaning and origins. Scholars generally agree that tamgas have figurative roots in the schematic depictions of meaningful objects or animals that may have some kind of relationship with the families to which they refer.[4] Certain scholars, however, think that tamgas share something with writing, and have gone so far as to conclude that tamgas might indeed be some sort of alphabet (Nickel 1973). Thus it is important to present some considerations on the use of tamgas among the ancient Iranian populations, reflecting on the social premises of their employment and their relationship with writing.

Both writing and tamgas were developed for the same needs, namely for accounting. They are two different responses, or rather two different steps of the same response to the demand for adequate social rules to regulate and guarantee personal properties. (Cf. Gelb 1968, p. 36: "Symbols used as property marks are an important step toward writing.") The main difference is the following: while writing relies on signs (graphemes) that make up different words and may be combined in countless speeches on whatever subject, tamgas communicate just one kind of information, that pertaining to identity and ownership. Tamgas arise in social milieus where written communication is absent, where information is conveyed through spoken language or through visual and physical means. Such a characterization pertains to pre-urban, agro-pastoral communities, whereas writing arose with urbanization and specialization of jobs, that led to the storing and accounting of different kinds of goods (Schmandt-Besserat 1992).

A feature that has seldom been considered in this regard is that the birth of writing was the birth of counting too: establishing the distinction between words and abstract numbers was an achievement of sedentary peoples. With this consideration in mind, we can observe that within pre-urban societies, concrete counting is maintained through the use of tamgas that take the place of abstract numbers: every animal is branded and every jar, weapon and other valuable item marked, as they are concretely counted, tamgas being the only means to claim ownership of them. Obviously, this method of accounting is adequate as long as the principal means of economic exchange is generalized reciprocity rather than hierarchical redistribution. That is, the method functions within families and clans relying on blood relations, but is inadequate within proper states. However, the history of the Iranian populations shows that the system of tamgas often survived and retained much importance within the urban and literate contexts, as it represented a native way of thinking and managing, deeply rooted in their cultural legacy. We

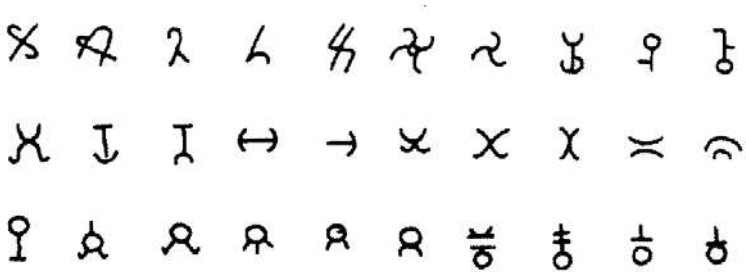

Fig. 3: Examples of Achaemenid Anatolian tamgas. After: *Boardman 1998, p. 4, Fig. 4.*

must not forget that alphabetization was a privilege of few people even in the Achaemenid and Sasanian times, and Iranian people kept depicting tamgas on administrative instruments such as coins and seals, as they were easily understandable by everybody, both literate and non-literate people.

The fact that the earliest Iranian tamgas we know come from urban, sedentary communities, even large empires such as the Achaemenid one (Fig. 3; see the western Anatolian tamgas collected by Boardman 1998), is due to the nature of the objects on which they are depicted. In fact, among nomads, tamgas are usually branded on animals' skins and depicted on carpets, felts, or clothing — in a word, on perishable materials that are seldom preserved in archaeological excavations. In contrast, within urban societies ownership and administration are regulated by durable means such as coins and seals that are often brought to light by archaeology.

Tamgas' functions were retained when they were depicted on objects used in the literate, urban societies such as coins and seals. However, on coins the identification and warranty purposes were already accomplished by different devices. In effect, the Greek monetary system often used letters and monograms since its birth (Fig. 4): these alphabetical devices could have different functions, indicating personal identities, identification of mints, or dates (see de Callatay 2012). Since the Greek and Iranian monetary systems met in the Hellenistic age, tamgas and letters or monograms could sometimes appear on the same coins, perhaps with different purposes, or maybe with the same function, namely to inform people with different backgrounds — both literate and not-literate — through the appropriate means, namely words and marks. However, such coexistence led to a certain confusion in research, as a notorious tendency of European scholarship is to interpret foreign civilizations in the light of the European cultural legacy. Thus a number of scholars interpreted tamgas as akin to monograms, because the latter were better known from Greek and Roman numismatics. The eminent historian Helmut Humbach (1961) proposed to read a series of Sarmatian tamgas as monograms of the Greek gods Zeus and Dionysos. Some years later, in an article that had much resonance in Western scholarship, Helmut Nickel (1973) further injected confusion into the debate, pointing out vague similarities of tamgas with the earliest Slavic alphabet, namely the Glagolitic letters and numbers, and with Turkish tamgas and zodiac signs as well. Nickel's article, while stimulating, strengthened the tendency to consider tamgas as mysterious, magic kinds of signs; in rather vague ways, it pointed to fascinating, though groundless, hypotheses.

What is by and large the current consensus about Greek monograms holds that such devices are first found on Greek coins beginning from the 5th century BCE. In the Classical age, plain letters, usually the first two letters of a word, were often displayed on coins. They were still neither ligated nor assembled in any way; so we cannot actually speak of monograms. Rather, they are abbreviations, cyphers. From the 4th century BCE, a certain taste for aesthetic embellishment or intellectual games led the minters to combine two or more letters in various kinds of ligatures, arranging letters together in a more or less geometric way. Here indeed lies the beginning of monograms. Though different ideas are expressed in literature as to what information they contain, it is possible to discern a certain trend: i.e., earlier monograms preferably referred to the name

Fig. 4 a–d. Examples of monograms on Greek coins (a. Lysimachos; b. Antigonos Monophthalmos; c. Antiochos III; d. Demetrios Poliorketes). After: <*http://coinarchives.com*>.

Fig. 5 a–d. Examples of monograms on Indo-Parthian, Indo-Scythian and Bactrian coins (a. Antimachus I; b. Maues; c. Philoxenus; d. Azes). After: <*http://coinindia.com*>.

of the minting town, or the ethnic identity of people settling the town, or the eponymous hero; later, more or less from the Hellenistic age, monograms started to hint at personal names. Whose names, however, is matter of debate. Numismatists often identify officers or magistrates of the ateliers, though I suspect they have just avoided the problem by giving an answer which relies on personal names for individuals whom in fact we cannot know. Indeed, attempts to identify town mints in the Hellenistic period have often been unsuccessful, as the letters composing the monograms do not always match those of the mint towns. While Imperial Roman and Byzantine monograms almost uniformly refer to the name of the Emperor, there are still a lot of inconsistencies in attempts to interpret monograms as abbreviations of personal names for the Hellenistic coinage.

A similar or even worse situation prevails for the less investigated Parthian, Bactrian and other Central Asian coinages where Greek monograms often occur (Fig. 5). Cunningham's effort (1892/1971) to demonstrate that the monograms on Central Asian coins were related to the mint cities was a total failure, according to Tarn (1951, p. 437), who instead was convinced that monograms might indicate moneyers, mint-masters or city-magistrates. As Richard B. Whitehead has stated, "the truth probably lies between the views of Cunningham and Tarn" (quoted in Marshall 1951, pp. 830–31). But this, again, seems to avoid the problem, and the truth is that nobody has yet found a satisfying answer as to the meaning and function of monograms on Hellenistic coins. Moreover, one should keep in mind that the Indo-Scythian and Indo-Parthian coins are among the most coveted and expensive coins on the antique market. Consequently, a great number of fakes may well have been issued in the last century, resulting in a number of senseless monograms being credited, further confusing research on them.

However, deciphering Greek monograms neither is my aim nor falls within my expertise. Rather, I focus here on the fact that, beginning in the Hellenistic period, both tamgas and monograms were displayed on coins and seals of the Iranian populations (especially on Parthian coins, kharoshthi monograms being first used on Kushan coins). Potentially complicating the situation is the fact that Central Asian coins often display symbolic devices of a third and different tradition, such as the Indian *triratna* or *nandipada* (Fig. 6). However, since these are clearly distinguishable, confusion should not arise. Now that

Fig. 6 a–b. Indian triratna *or* nandipada *on Indo-Scythian and Kushan coins (a. Vasudeva; b. Vima Kadphises).* After: <*http://coinindia.com*>.

several studies on tamgas have cleared confusion on that point, one can see that monograms and tamgas really share certain features in that they had a similar function, namely to affirm the validity of coins by referring either to an individual or to a family who might authorize their issue. In the first case, that would be an officer; in the second case, the ruling clan.

Nonetheless, to summarize, there also are two substantial differences between monograms and tamgas, not only as regards their shapes, but more importantly in the contexts of their use and their social and cultural implications:

1) Monograms and tamgas were devised for completely different purposes, under completely different social conditions: the former were conceived specifically to affirm the validity of coins and seals, namely instruments of the administration and trade, while the latter were adopted from a different context, being originally displayed on properties and cattle, that is, the

objects of trade. Monograms were specifically created within a social order regulated by institutions not relying on blood-relationship. In contrast, tamgas belong to small social orders based on blood-relationship. Their use on coins and seals is a secondary one, which starts when nomadic, non-literate communities developed new social structures under the external influence of the urban, literate societies.

2) If we are to believe the interpretation given by numismatists with regard to the Hellenistic items, monograms are marks expressing identity by an individual: they are in effect signatures. Therefore the monogram of a son may often be totally different from the monogram of his father and have a random relationship with it. Names within a family do not usually relate to each other; they are usually chosen by relatives according to individual, non-predictable criteria. On the contrary, tamgas are marks expressing identity and ownership by a clan, a group of relatives. According to ethnological research conducted among Mongols and Kazakhs, tamgas' shapes do not change very much as generations go by. A well regulated grammar of additional signs and rotations exists in the morphology of tamgas, a grammar that allows everyone with a trained eye to understand the relations within a clan and between different clans (Waddington 1974, pp. 480–83; Yatsenko 2001, pp. 15–16). By means of well regulated changes in the disposition of signs, tamgas slowly change as generations go by, and from their disposition it is possible to understand the status and relationship of a person within a clan.

It follows that tamgas might be an extremely useful tool of research, if only the numismatists would appreciate their value. Exceptions to this neglect of tamgas, largely by Western scholars of Central Asia, are in the work of Ukrainian and Russian scholars who have already studied them for many decades (see e.g., Drachuk 1972; Yatsenko 2001). In the Western literature, the word "tamga" rarely appears; instead we find a generic "device," "symbol," or worse, "monogram," which thus confuses two distinct categories of signs, with different origins, compositions, and referring to completely different social structures with diametrically opposed weight given to the individual and the community.

A related subject which deserves further research is the so-called Sasanian "monograms" that are often found on Sasanian seals and coins (Fig. 7), and have long been debated by eminent scholars (Unvala 1953; Bivar 1959; de Menasce 1960; Frye 1964; Göbl 1971). Even today some scholars may call such marks "monograms," without explaining which letters they can discern, let alone how should they be read. Readings have been attempted for just a handful of them, where most of the extant ones remain unclear. Robert Göbl (1971, esp. pp. 110–11, Figs. 1–2) made some successful efforts, reading "pylwc gwšnsp," a personal name (here, Fig. 8). For other examples, Adhami (2003) derived a single reading (the word "amargar," i.e., an administrative office) for "monograms" having different shapes that are composed of clearly different elements. So it would seem that only a few of these marks might actu-

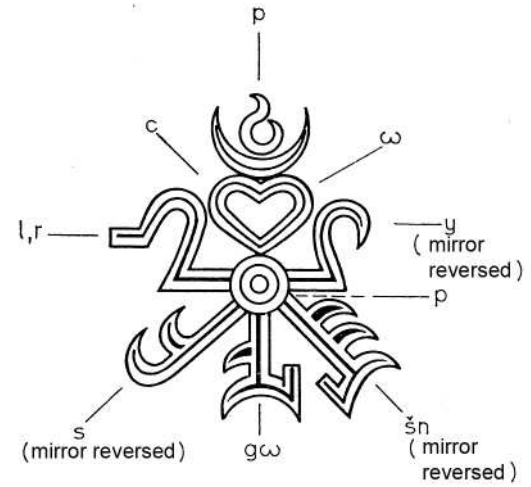

Fig. 8. Sasanian monogram-tamga deciphered by Robert Göbl (1971, p. 111, Fig. 2).

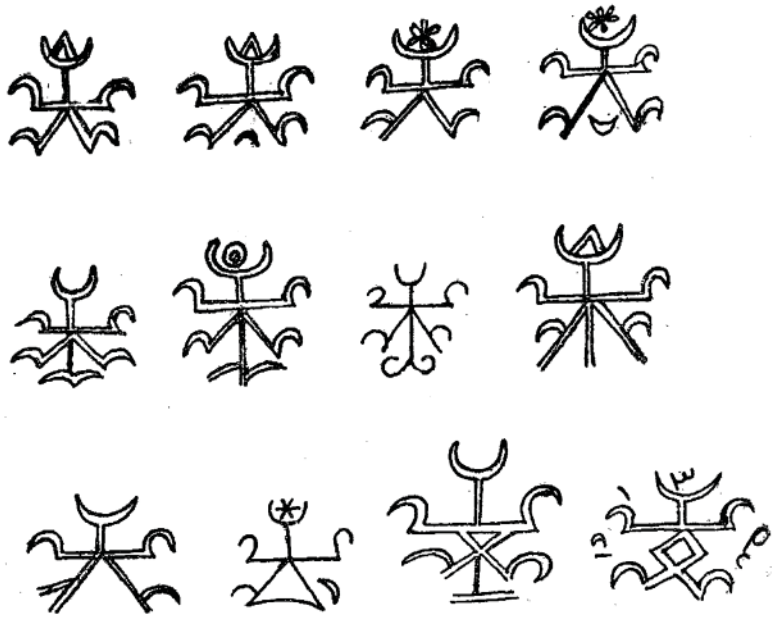

Fig. 7. Examples of Sasanian "monograms." After: *Unvala 1953, Pl. VI.*

ally be deciphered, the rest remaining unintelligible. Therefore it is incorrect to label them all "monograms" and suppose that they are consistently composed of Pahlavi letters, an idea which is at best partially valid.

A statement by Christopher J. Brunner (1978, p. 123) best expresses the status of "Sasanian monograms" between image and writing, viz.: "Later Sasanian devices show an increasing tendency to absorb monographic elements; this trend paralleled the freer use of abbreviations generally." In other words, "Sasanian monograms" were actually tamgas. However, in the late Sasanian age, some engravers began to adapt Pahlavi letters to the layout of those tamgas, likely for aesthetic reasons and as an intellectual game — that is, for the same reasons that might have led Greek minters to create monograms as signatures on coins. Yet what we seem to have here is just a few cases of virtuosity, whose aim was to leave the structures of tamgas intact, though they were "written" by, or rather included, Pahlavi letters.

In sum, the few Sasanian "monogram-tamgas" that turn out to be actually composed by Pahlavi letters can be considered as ingenious marks. They combine the information on the individual name and the information on the clan, the latter remaining, however, the main and immediately recognizable one. That is, it is a mark that collects name and surname, a figurative signature indeed, that reflects the different social premises of tamgas and writing to which I called attention above.

Now let us turn to a different matter, a meaningful case of the attitude of Western scholarship towards researches on tamgas: I refer to the so-called "frawahr symbol," appearing in the Sasanian period on a number of artifacts (Fig. 9). It is a schematic depiction composed of a ring standing on two diverging lines, crossed at the middle by a horizontal line. While there has been some speculation about that symbol, which vaguely recalls a cross (or, suggestively, a "two-legged Ankh"), it has never been the object of detailed analysis. With reference to a suggestion by Silvestre de Sacy, its interpretation as the "frawahr symbol" was sustained in a series of recent publications by Rika Gyselen, who however just labeled it so without discussing the matter at length (Gyselen 2003). In contrast, Abolala Soudavar (2009, pp. 426–27) recently proposed to read the device as "a caricature symbol of Apam Napat," as he sees a certain similarity with a schematic drawing of a child. His arguments are hardly convincing, based as they are on a personal interpretation of that drawing. (We should note as well that Soudavar adduced inconsistent arguments for the so-called "cow-sign" [Fig. 10, second figure from the left], whose shape should be rather compared with the well-known Gondophares' tamga and other tamgas of the Parthian period.) Perhaps the most credible reading is that proposed once more by Göbl (1976, Nos. 567–68, Taf. 44), who read the symbol as an "Investiturschleife," namely a "loop of investiture." Indeed, a certain similarity exists between such a symbol and the image of the bi-ribboned diadem symbolizing the investiture of the Sasanian kings on some rock reliefs (e.g., see Ardashir II invested by Ahura Mazda at Tāq-i Būstān; Fig. 11). However I am convinced that

Fig. 10. The main Firuzabad relief. After: *Vanden Berghe 1984, p. 63, Fig. 8.*

Fig. 9. The so-called "frawahr symbol" carved in a niche at Tāq-i Būstān. Photo: Archive Centro Scavi Torino.

Fig. 11. The investure scene at Tāq-i Būstān. Photo © 2010 Daniel C. Waugh.

none of these interpretations might be correct, the real purpose and implication of that symbol has possibly been misunderstood, and a huge amount of historical information lost. I would suggest instead that the symbol might be an identity mark, a tamga in all respects.

The Firuzabad rock reliefs are a fundamental document in this regards, as the so-called "frawahr symbol" is repeatedly depicted on the horse of the king Ardashir I (Fig. 10, second figure from the right). Significantly, however, three different symbols are also depicted on the saddles and headgear of each one of the mounted characters. A recent analysis of the Firuzabad reliefs by Maciej Grabowski (2011) has offered a better understanding of the scenes and the characters, based on the different marks displayed on their horses and headgear. However, in my view, Grabowski stopped short of a full understanding of the true nature of all those symbols: he explained the so-called "frawahr" and "heir" symbols as, respectively, divine and status markers. On the contrary, I am convinced that they are both identity marks of the Iranian clans: that which is allegedly considered to be the Parthian dynastic mark, depicted on the saddle of Artabanus IV falling from his horse, provides the key to such an interpretation. For the sake of the internal coherence of the scene, all the marks displayed at Firuzabad should be better interpreted as identity marks of the Sasanian aristocracy. The context indeed calls for such an interpretation, as the intent of those marks on the relief was clearly to inform about the identities of the figures, thus allowing an immediate understanding of the scenes. In this view it would be not appropriate to mix identity marks, status marks and divine marks in the same scene.

My interpretation might also provide different insights on the coins and seals where such marks are often depicted, adding fundamental information on a number of historical events. The so-called "frawahr symbol" has recently been found on several pawns coming from an exceptional fire temple at Mele Hairam, in southern Turkmenistan (Kaim 2011, fig. at p. 313), but the lack of information on the contexts of the pawns in the preliminary publications prevents me from further speculation about them. Whatever the meaning of the symbol, one can at least note that if, as assumed, the temple of Mele Hairam was built at the end of the Parthian period, that mark might possibly originate already in the Parthian period, and thus not be an exclusively Sasanian mark. If I am correct in interpreting it as a tamga, perhaps it could help in understanding the blood relations between the Parthian and Sasanian aristocracies at the turn of the dynasties.

Now for my final point. As just noted, the last Parthian ruler, Artabanus IV, is identified at Firuzabad by a tamga composed by a ring on the top of a vertical staff (Fig. 10: first figure on the right). This mark, which first appeared under Orodes II and was depicted on both obverses and reverses of Parthian coins, is a "sort of family crest" and is usually called "the Arsacid symbol" by scholars (see Grabowski 2011, p. 220; Sinisi 2012, p. 64).

There is a certain similarity between this mark and images from a series of recent finds which have expanded the inventory of the known Parthian tamgas. These are marks depicted on a number of clay sealings excavated in the Southwest Building of Old Nisa, Turkmenistan, where the Arsacid kings established a sacred citadel with ceremonial purposes in the 2nd century BCE. Since 2009, a dozen stamp sealings (of both jars and doors) have been found, bearing the impressions of possibly one and the same tamga, represented with slight differences on each impression (Fig. 12; see Manassero 2010; Lippolis 2010, pp. 40–42, Fig. 6). No parallel may be found to these tamgas in the previously known inventory of sealings from the Square House of Nisa (cf. Masson and Pugachenkova 1954). The main image may be roughly described as composed by a ring (or hook)

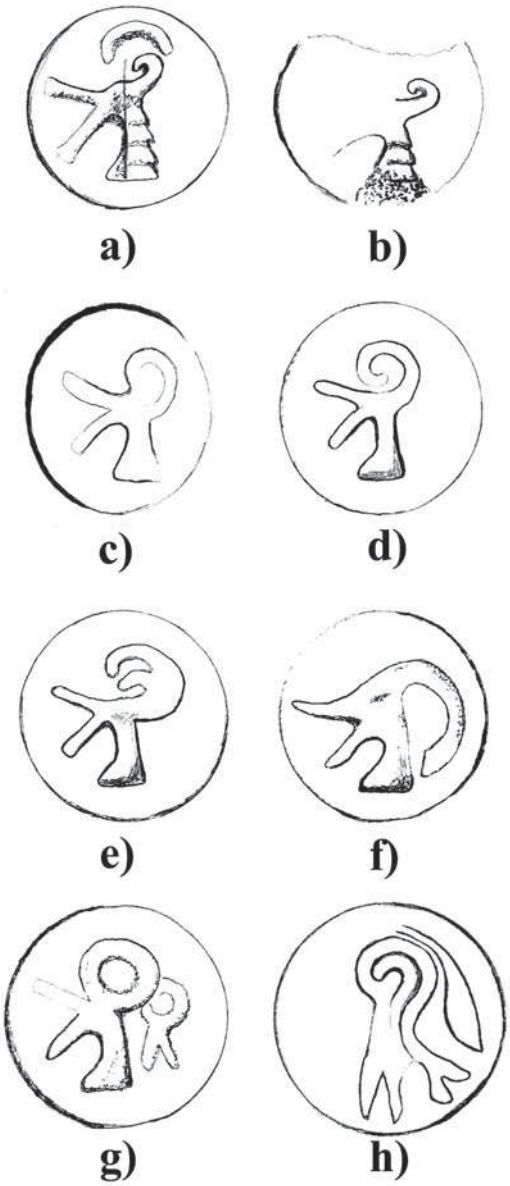

Fig. 12. Parthian tamgas on sealings from Old Nisa (drawing by the author).

on a staff, with two straight diverging lines at the top of the staff, facing leftwards. One impression has a second, smaller, mark on the right, composed of a ring standing on two diverging staffs similar to legs. In my previous publication I focused on the imagery of those tamgas and suggested one recognize their figurative origins in an ideologically meaningful image, namely the club and mace — the symbol of the Greek god Herakles, from whom the Arsacid dynasty claimed to be descended. However, this was mere speculation, as the state of preservation of the sealings does not allow reliable conclusions even today. Until there are clearer findings (clearer impressions or the seals themselves) to help resolve this matter, the real roots of the Nisean tamga remain unexplained. The badly preserved, crushed sealings with erased and faint impressions might even raise doubts that tamgas are in fact depicted. However, the secondary mark on one of the impressions (Fig. 12g), which closely matches the tamga of Phraates IV (Yatsenko 2001, Fig. 33.b.4), supports the idea that the main mark is a tamga too.

Whatever the exact subject hinted at by these new tamgas, I cannot refrain from noting a certain similarity between them and the so-called "Arsacid symbol." The tamga on the sealings from Nisa has quite a different shape, asymmetrical, with two straight and diverging lines on the left, and a less abstract appearance that made me suppose that "it might preserve some memory of the object originally depicted." However, the overall structure with an upper round element standing on a staff with a wider base is similar. Comparing the two marks, the diverging lines of the Nisean one may perhaps be explained as added signs to distinguish a branch of a clan, according to the previously mentioned rules regarding the changes of tamgas through the generations. As Nisa was the first Arsacid capital, established in their very homeland in the early Parthian period, I am inclined to suppose that the tamgas depicted on the newly found sealings might be connected to some extent with the so-called "Arsacid symbol." The ring-on-staff seems to be a recurrent element in both these Parthian marks, and in the Gondophares' tamga as well. Links with the Sasanian tamga featured by Shāpur I on the Firuzabad relief (that which Soudavar called the "cow-sign"; see the second figure from the left in Fig. 10) might be taken into consideration and lead to new results in historical research. Always bearing in mind the warning of Humphrey Waddington against automatically connecting distant tamgas by virtue of their shape, "we can suppose that there is a common stock of brandmarks that can be used by different people simultaneously, as long as contiguity does not cause confusion. This is like the use of proper names in our society or the use of colors in making maps: adjacent countries must be given different colors but further away the same colors may be used again" (Waddington 1974, p. 473).

In this paper I have tried to lay out some topics about tamgas that have been seldom discussed by archaeologists and historians. In particular I have called attention to the relationship of tamgas to writing and to the social background they imply. In more specific examples, I outlined some largely understudied topics that have emerged in the last decades which merit further research, since they may have important consequences for our knowledge of ancient Iranian civilizations. The recent studies on tamgas that are largely the fruit of Russian scholarship point to a successful trend in focusing on functional matters rather than on the formal ones (Ol'khovskii 2001; Yatsenko 2001). They have stopped speculating merely on what objects are or "might be" depicted; rather they are concerned with learning about their contexts of use and their circulation and historical implications. This must be the agenda for future studies on tamgas. Scholars may reach better answers if they focus on the functions and the evolution of tamgas in time and space, in order to track the movements of people and increase our understanding of events about which there are no written sources.

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Notes

1. "Tamġa" is a Turkish word, also witnessed in Mongol as "tamaga" or "temdeg." The most ancient source witnessing a secondary form of the word is the so-called Ačura inscription, coming from the Abakan region in the Yenisei valley, that reads: "yirdeki tamqalıġ yïlqï bungsïz erti," meaning "his herds marked on his lands were countless." Here we find a clear reference of the word to ownership and cattle-branding (Orkun 1994, p. 544). The Uighur lexicographer Mahmud al-Kashghari gives a full account of the Turkish tamgas as of the 11th century (Kashgari 1982–1985).

2. The articles published in Evans Pim 2010, a real milestone in the studies on tamgas, show the diffusion of the identity marks among ancient and modern populations all around the world, from Europe to South America and Africa.

3. The famous Pazyryk and Tarim mummies display different kinds of images (mythological subjects and astral symbols), but we cannot exclude that identity marks were tattoed or branded on human skin in the past, as happens today. We are familiar with a number of depictions of tattoed Iranians and Thracians on Greek vases, and sources mention this practice among the Iranians, where it was not condemned as in Graeco-Roman civilization (Jones 1987; Renaut 2004).

4. Some scholars proposed to relate tamgas to the "deerstones" and the Bronze Age petroglyphs that are often found across Siberia in the vicinity of kurgans. Such relationships must be carefully considered, as those petroglyphs might often be of a votive and sacral kind. However, we may notice a certain affinity in the context of the so-called "encyclopaedias of tamgas," that survive on some rocks in Ukraine and Siberia (e.g., the lion statue from Olbia and the open-air sanctuary of Bayte III; see Yatsenko 2001, pp. 68–83). These monuments collect marks of the different clans that met there to commemorate some event or stipulate some path. Both these kinds of monuments establish a strong relationship between man and the environment. They are signacula in all respects, reminders that require no written accounts.